

CLAIMS

1. A decoding apparatus comprising:

5 a backward probability calculation section that divides a data sequence into a plurality of windows and calculates backward probability per window using a backward probability at a predetermined time calculated in previous iterative decoding as an initial value in iterative decoding of this time;

10 a storage section that stores the backward probability at the predetermined time calculated by the backward probability calculation section; and

15 a likelihood calculation section that calculates likelihood information using the backward probability calculated by the backward probability calculation section.

2. The decoding apparatus according to claim 1, wherein the backward probability calculation section
20 shifts a window position backward in accordance with a number of iterations of decoding and calculates the backward probability.

3. The decoding apparatus according to claim 2,
25 wherein the storage section stores a backward probability at a time next iterative decoding begins in accordance with the backward shift of the window position by the

backward probability calculation section.

4. A decoding apparatus comprising:

5 a forward probability calculation section that divides a data sequence into a plurality of windows and calculates a forward probability per window using the forward probability at a predetermined time calculated in previous iterative decoding as an initial value in iterative decoding of this time;

10 a storage section that stores forward probability at the predetermined time calculated by the forward probability calculation section; and

a likelihood calculation section that calculates likelihood information using the forward probability
15 calculated by the forward probability calculation section.

5. A decoding method comprising dividing a data sequence into a plurality of windows and calculating a
20 backward probability per window using a backward probability at a predetermined time calculated in previous iterative decoding as an initial value of iterative decoding of this time.